(19) World Intellectual Property Organization International Bureau

ZIPO OMPI

. I NACIO DILIBIRIO DI BILITIS FIGRI DERIN CONTE DALL'E IL IL BRACO LIUTO DILITI CARRI CRIALI RICARRISTI LORD DELL'ERI

(43) International Publication Date 6 April 2006 (06.04.2006)

(10) International Publication Number WO 2006/036001 A2

(51) International Patent Classification:

Not classified

(21) International Application Number:

PCT/JP2005/018397

(22) International Filing Date:

28 September 2005 (28.09.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2004-287092 30 September 2004 (30.09.2004)

(71) Applicant (for all designated States except US): RICOH COMPANY, LTD. [JP/JP]; 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo, 1438555 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): YOSHII, Kohji [JP/JP]; 920-50, Shidehara, Sanda-shi, Hyogo, 6691506 (JP).

(74) Agent: ITOH, Tadahiko; 32nd Floor, Yebisu Garden Place Tower, 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 150-6032 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SWITCHING REGULATOR

(57) Abstract: A switching regulator is disclosed that includes a switching transistor controlling output of an input voltage by switching in accordance with an input control signal; a smoothing circuit part configured to smooth the output voltage of the switching transistor and output the smoothed voltage to an output terminal; a control circuit part configured to control the switching of the switching transistor in synchronization with an externally input clock signal so that a voltage at the output terminal is a predetermined constant voltage; and a clock signal detector circuit part configured to detect the presence or absence of inputting of the clock signal. Upon detecting stoppage of the inputting of the clock signal, the clock signal detector circuit part causes the control circuit part to stop operating and perform a standby operation for reducing power consumption and thereby to turn off the switching transistor.

